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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/038,603

01/08/2002

Steven Doe

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03/28/2003

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EXAMINER

NEGRON, ISMAEL

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,603

Applicant(s)

DOE, STEVEN

Examiner

Ismael Negron

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **UV-Radiation Excited Backlighting Device.**

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because includes phrases which can be implied. Correction is required. See MPEP § 608.01(b).

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "3b" has been used to designate both "*rear substrate layer*" (page 3, line 16) and "*rear substrate*" (page 3, line 19). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

In addition, note reference character "9" has been used to designate both "*reflective layer*" (page 3, line 28) and "*reflector*" (page 5, line 27).

The applicant is advised that the reference characters must be properly applied, with no single reference character being used for two different parts or for a given part and a modification of such part. See MPEP §608.01(g). Correction is required.

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Applicant is further advised that this action only exemplifies the objections to the drawings, applicant's cooperation is requested in correcting all the occurrences of the cited, or any other errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 8 and 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsai (U.S. Pat. 5,739,879).

Tsai discloses a backlighting device for LCD, such device having:

- **a radiation source**, Figure 6, reference number 66;
- **a layer associated with the radiation source**, Figure 6, reference number 65;
- **the layer containing a matrix of particles that emit visible light in response to the radiation source**, column 6, lines 16-24;
- **the radiation source emitting invisible light**, column 8, line 22;
- **the radiation source emitting ultra-violet light (UV light)**, column 4, line 22;
- **the layer containing a matrix of phosphors or fluorescent particles**, column 8, lines 24-44;
- **the particles being distributed to provide uniform light intensity**;
- **the particles being of a single color**, column 6, lines 52-58;
- **the particles being of different colors**, column 6, lines 52-58;

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- **a reflector disposed on the layer**, column 6, lines 45-47; and
- **an LCD**, column 5, lines 55-60.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (U.S. Pat. 5,739,879).

Tsai discloses a backlighting device for LCD, such device having:

- **a radiation source**, Figure 6, reference number 66;
- **a layer associated with the radiation source**, Figure 6, reference number 65; and
- **the layer containing a matrix of particles that emit visible light in response to the radiation source to illuminate a LCD**, column 6, lines 16-24.

Tsai discloses all the limitations of the claims, except the LCD being used in a mobile telephone.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the LCD illumination device in a mobile phone to

improved the visibility and efficiency of such mobile telephone LCD, as per the teachings of Tsai (see column 4, lines 10-18).

Relevant Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ushida et al. (U.S. Pat. 4,841,155), **Matsui et al.** (U.S. Pat. 5,201,931), **Cordy, Jr.** (U.S. Pat. 5,190,365), **Kashima et al.** (U.S. Pat. 5,618,095) and **Lengyel** (U.S. Pat. 6,042,241) disclose various backlighting devices for LCD using UV-light and phosphorous layers.

Allowable Subject Matter

8. Claims 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Applicant teaches an LCD backlighting device having radiation source and a layer associated with the radiation source, such layer containing a matrix of particles that emit visible light in response to the radiation source, to illuminate a LCD. The radiation source is planar or consisting of a plurality of point-like sources.

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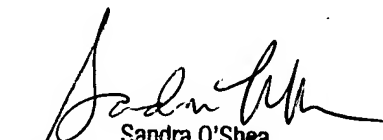
No prior art was found teaching individually, or suggesting in combination, all of the features of the applicant's invention, specifically an LCD backlighting device having a planar or point-like radiation sources for exiting a matrix of particles.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negrón whose telephone number is (703) 308-6086. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (703) 305-4939. The facsimile machine number for the Art Group is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

Inr

March 23, 2003